



UNIVERSITA' DI MESSINA  
FACOLTA' DI SCIENZE

Dipartimento di Chimica Inorganica, Analitica  
e Struttura Molecolare



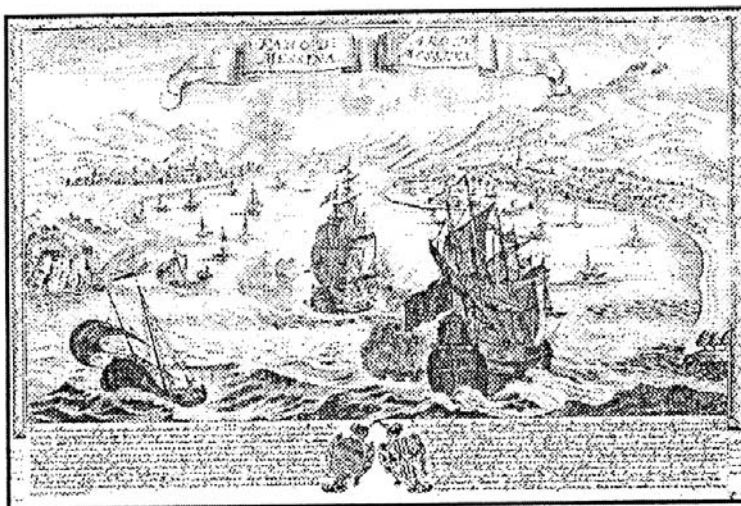
Società Chimica Italiana  
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Atti Accademia Peloritana dei Pericolanti  
Classe I di Scienze Fisiche  
Matematiche e Naturali

WORKSHOP ON PLATINUM CHEMISTRY

ABSTRACTS



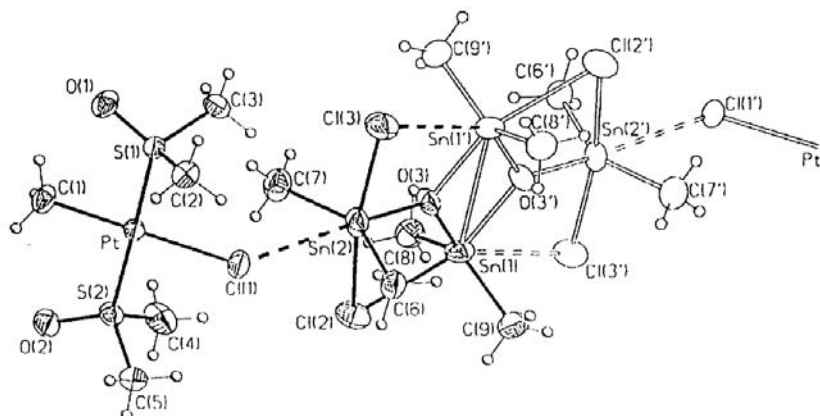
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**CRYSTAL AND MOLECULAR STRUCTURE  
OF *Trans*-CHLORO  
METHYL (bis-DIMETHYLSULFOXIDE) PLATINUM(II)**

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**Crystal data.**  $C_9H_{27}Cl_3O_3PtS_2Sn_2$ , Triclinic,  $M = 786.25$ , space group  $P\bar{1}$  ( $n^\circ 2$ ) with  $a = 9.373(2)$  Å,  $b = 9.5760(10)$  Å,  $c = 14.087(3)$  Å,  $\alpha = 70.29(1)^\circ$ ,  $\beta = 72.50(1)^\circ$ ,  $\gamma = 72.21(2)^\circ$ ,  $V = 1105.5(4)$  Å<sup>3</sup>,  $Z = 2$ . Final  $R = 0.0237$ ,  $R_w = 0.0245$ ,  $G.o.f = 1.085$  for 2505 independent reflections with  $I \geq 3\sigma(I)$ .

In the solid state the title complex co-crystallizes with the polynuclear tin(IV) compound: di- $\mu$ -3-oxo-bis( $\mu$ -dichloro)-bis( $\mu$ -dimethyl-tin(IV))-bis (chlorodimethyl-tin(IV)) [1]. This analysis is the first example of crystal structure of a *trans*-dimethyl sulfoxide platinum(II) compound [2]. The  $Pt-S$  bond distances (mean value 2.259(2)Å) are slightly shorter than the value of 2.292(3)Å reported for the *trans*-dichlorobis(di-*n*-propyl sulfoxide) platinum(II) [3]. The long  $Pt-Cl$  bond distance of 2.416(2)Å is mainly due to both the strong *trans*-influence of the opposite methyl group and the interaction {3.442(2)Å} of Cl1 atom with the tin atom (Sn2).



## REFERENCES

- [1] P. H. Harrison, M. J. Begley and K. C. Molloy. *J. Org. Chem.*, **186** (1980) 213-236
- [2] *Cambridge Structural Database* R. 5.06
- [3] R. Melanson and F. D. Rochon. *Acta Cryst*(1988) **C44**, 1893-1895

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